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09/401,937	09/23/1999	ROBERT A. HUME	CA9-99-002	5331

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John R Pivinichny/IBM Corporation
Intellectual Property
Dept IQOA/Bldg 040-3
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EXAMINER

ABELSON, RONALD B

ART UNIT	PAPER NUMBER
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2666

16

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/401,937

Applicant(s)

HUME ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2003 and 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 6) ☐ Other: _____.

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 5,943,408) in view of Susai (US 6,411,986).

Regarding claims 1 and 8, Chen (US 5,943,408) teaches a method and apparatus for a telephone system (fig. 3) of the common channel signaling and control type having signaling network means for handling switching and control signals (fig. 3 link 16, signaling messages, col. 5 lines 54-55) separate from voice signal (fig. 3 Transport Network Link box 14, col. 5 lines 48-51), the signaling network means adapted to respond to and handle calls from wireless subscribers (col. 5 lines 56-59) pertaining to requests for services (fig. 3 boxes 15), the signaling network means including means for providing transaction signals (fig. 3 link 16, signaling messages, col. 5 lines 54-55) in response to calls to the telephone system by a

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wireless subscriber requesting service, the signaling network means further including a message server means (fig. 3 box 13).

The message server includes a means for creating message signals, which are compatible with the signaling network means and service nodes, in response to the transaction signals, the means for creating message signals not being comprised by a service node of the network (fig. 3 messages from box 13 to 15, col. 6 lines 2-4).

The message server includes a message router means connected to said means for creating said message signals for routing said message signals to one or more interfaces for service nodes (fig. 3 box 13 routes to one of a plurality of boxes 15).

The message server includes a means for connecting at least one service node to the message server means in order to convey service provided by the service nodes to the wireless subscriber in response to the subscriber requesting service (fig. 3 link 18).

Although Chen teaches multiple service nodes, the reference is silent on performing arbitration and prioritization among the various service nodes of the network.

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Susai teaches in an intelligent network performing arbitration and prioritization among the various service nodes of the network (fig. 2 box 202, load balancer, col. 3 line 64).

Therefore it would have been obvious to one of ordinary skill in the art, having both Chen and Susai before him/her and with the teachings [a] as shown by Chen, a method and apparatus for a telephone system of the common channel signaling and control type having signaling network means for handling switching and control signals separate from voice signal, and [b] as shown by Susai, in an intelligent network performing arbitration and prioritization among the various service nodes of the network, to be motivated to modify the system of Chen by incorporating within the call server (fig. 3 box 13) an algorithm to perform load balancing among the various servers (fig. 3 boxes 15). This modification can be performed in software. This would improve the system by permitting an equitable distribution of processing load among the plurality of servers.

Regarding claim 2, the message server means further includes message handler means for sending and/or receiving transaction signals to and/or the signaling network means (Chen: fig. 3 link 16, signaling messages, col. 5 lines 54-55).

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Regarding claim 3, the message router means includes means for sending and/or receiving message signals to the means for connecting at least one selected server node to the message server means (Chen: fig. 3 box 12, 13, 15).

Regarding claim 6, message server means includes service node handler means for communicating the message signals to and from node interface means of one or more service nodes (Chen: fig. 3 messages from box 13 to 15, col. 6 lines 2-4).

Regarding claim 7, node interface means to interconnect said service nodes with the message server means includes transaction information manager means for further processing said message signals (Chen: packet network, col. 6 lines 6-9). The examiner associates the applicant's transaction information manager with a processor in the packet network.

Regarding claim 9, sending and receiving transaction signals to and from the signaling network and the message server (Chen: fig. 3 link 16, signaling messages, col. 5 lines 54-55), sending and receiving said message signals resulting from the transaction signals to and from an interface to the service node

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(Chen: fig. 3 link 18), selecting a node from a plurality of nodes (Chen: col. 5 line 65 - col. 6 line 2), and communicating said message signals to and from the service node interface (Chen: fig. 3 link 18).

3. Claim 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 5,943,408) in view of Susai (US 6,411,986) and Smith (US 6,501,950).

Regarding claim 4, Chen (US 5,943,408) teaches a method and apparatus for a telephone system (fig. 3) of the common channel signaling and control type having signaling network means for handling switching and control signals (fig. 3 link 16, signaling messages, col. 5 lines 54-55) separate from voice signal (fig. 3 Transport Network Link box 14, col. 5 lines 48-51), the signaling network means adapted to respond to and handle calls from wireless subscribers (col. 5 lines 56-59) pertaining to requests for services (fig. 3 boxes 15), the signaling network means including means for providing transaction signals (fig. 3 link 16, signaling messages, col. 5 lines 54-55) in response to calls to the telephone system by a wireless subscriber requesting service, the signaling network means further including a message server means (fig. 3 box 13).

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The message server includes a means for creating message signals, which are compatible with the signaling network means and service nodes, in response to the transaction signals, the means for creating message signals not being comprised by a service node of the network (fig. 3 messages from box 13 to 15, col. 6 lines 2-4).

The message server includes a means for creating message signals, which are compatible with the signaling network means and service nodes, in response to the transaction signals, the means for creating message signals not being comprised by a service node of the network (fig. 3 messages from box 13 to 15, col. 6 lines 2-4).

The message server includes a message router means connected to said means for creating said message signals for routing said message signals to one or more interfaces for service nodes (fig. 3 box 13 routes to one of a plurality of boxes 15).

The message server includes a means for connecting at least one service node to the message server means in order to convey service provided by the service nodes to the wireless subscriber in response to the subscriber requesting service (fig. 3 link 18).

Although Chen teaches multiple service nodes, the reference is silent on performing arbitration and prioritization among the various service nodes of the network.

Susai teaches in an intelligent network performing arbitration and prioritization among the various service nodes of the network (fig. 2 box 202, load balancer, col. 3 line 64).

Therefore it would have been obvious to one of ordinary skill in the art, having both Chen and Susai before him/her and with the teachings [a] as shown by Chen, a method and apparatus for a telephone system of the common channel signaling and control type having signaling network means for handling switching and control signals separate from voice signal, and [b] as shown by Susai, in an intelligent network performing arbitration and prioritization among the various service nodes of the network, to be motivated to modify the system of Chen by incorporating within the call server (fig. 3 box 13) an algorithm to perform load balancing among the various servers (fig. 3 boxes 15). This modification can be performed in software. This would improve the system by permitting an equitable distribution of processing load among the plurality of servers.

In addition to the limitations listed above, Chen teaches the message server includes a node selector means for routing

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message signals to service nodes based on the nature of the service requested (service specific server, fig. 3 box 15, col. 5 line 66 - col. 6 line 2).

The combination of Chen and Susai is silent on the node selector routing based upon the location of the wireless subscriber originating the request and the signaling network including a means for validating the wireless subscriber.

Smith teaches, in a SS7 environment, the node selector routing based upon the location of the wireless subscriber originating the request and the signaling network including a means for validating the wireless subscriber (IS-41, col. 3 lines 43-52).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Chen and Susai and Smith before him/her and with the teachings [a] as shown by the combination of Chen and Susai, a method and apparatus for a telephone system of the common channel signaling and control type having signaling network means for handling switching and control signals separate from voice signal and performing arbitration and prioritization among the various service nodes of the network, and [b] as shown by Smith, in a SS7 environment, the node selector routing based upon the location of the wireless subscriber originating the request and the signaling


network including a means for validating the wireless subscriber, to be motivated to modify the system of the combination of Chen and Susai by performing a hardware/software upgrade to ensure the system is IS-41 compatible. This would improve the system by facilitating the mobile subscribers to communicate with foreign systems (Smith: col. 3 lines 43-52).


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.


Ronald Abelson
Examiner
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DANIEL M. S.
FACSIMILE

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